Thursday, 16. April 2026

Lecture Session
14: Pharmacology and Technology
Thursday, April 16, 2026, 09:45 - 10:45

O.14.01 - Meet the Experts: TIVA and TCI

Chair: Tony Gin (Hong Kong, Hong Kong SAR, China)

O.14.01.1	**Introduction**	09:45 - 09:47
O.14.01.2	**TIVA. Theoretical foundation and practical considerations** Speaker: Talmage Egan (Salt Lake City, United States)	09:47 - 10:11
O.14.01.3	**Does the PK model and infusion pump matter?** Speaker: Michel Struys (Groningen, Netherlands)	10:11 - 10:35
O.14.01.4	**Question and Answer - Panel**	10:35 - 10:45

Lecture Session
14: Pharmacology and Technology
Thursday, April 16, 2026, 10:50 - 12:20

O.14.02 - Updates in Pharmacology

Chair: Vesela Kovacheva (Boston, United States)

O.14.02.1	**Introduction**	10:50 - 10:52
O.14.02.2	**The new Hypnotics Remimazolam and Ciprofol** Speaker: Michel Struys (Groningen, Netherlands)	10:52 - 11:10
O.14.02.3	**Suzetrigine, a Nav1.8 inhibitor** Speaker: Ken Johnson (Tucson, United States)	11:10 - 11:28
O.14.02.4	**Intravenous anaesthetics in obese patients** Speaker: Talmage Egan (Salt Lake City, United States)	11:28 - 11:46
O.14.02.5	**Introduction to microbiome pharmacology** Speaker: Tony Gin (Hong Kong, Hong Kong SAR, China)	11:46 - 12:04
O.14.02.6	**Question and Answer - Panel**	12:04 - 12:20

Lecture Session
14: Pharmacology and Technology
Thursday, April 16, 2026, 14:55 - 15:55

O.14.04 - Neuroscience

Chair: Lars Eriksson (Stockholm, Sweden)

O.14.04.1	**Introduction**	14:55 - 14:57
O.14.04.4	**Amnesia** Speaker: Jamie Sleigh (Hamilton, New Zealand)	14:57 - 15:12
O.14.04.3	**What we can do to postoperative delirium - prediction, prevention and beyond** Speaker: Sarah Saxena (Mons, Belgium)	15:12 - 15:27
	Neurobehavioural Pharmacology of Ketamine	15:27 - 15:42

	Speaker: Jamie Sleigh (Hamilton, New Zealand)	
O.14.04.5	**Question and Answer - Panel**	15:42 - 15:55

Lecture Session
14: Pharmacology and Technology
Thursday, April 16, 2026, 16:20 - 17:20

O.14.03 - Neuromuscular Block

Chair: Lars Eriksson (Stockholm, Sweden)

O.14.03.1	**Introduction**	16:20 - 16:22
O.14.03.2	**Why is it mandatory to monitor the effect of NMBAs and reversal agents - do we have the evidence?** Speaker: Lars Eriksson (Stockholm, Sweden)	16:22 - 16:37
O.14.03.3	**Every day management of NM block and monitoring - here are the best practice recommendations** Speaker: Stephan Thilen (Seattle, United States)	16:37 - 16:52
O.14.03.4	**Sugammadex and neostigmine complications - how to avoid!** Speaker: Ken Johnson (Tucson, United States)	16:52 - 17:07
O.14.03.5	**Question and Answer - Panel**	17:07 - 17:20

Lecture Session
14: Pharmacology and Technology
Thursday, April 16, 2026, 17:25 - 18:25

O.14.05 - Future Tech

Chair: Maxime Cannesson (Los Angeles, United States)

O.14.05.1	**Introduction**	17:25 - 17:27
O.14.05.2	**Automation in Anaesthesia** Speaker: Maxime Cannesson (Los Angeles, United States)	17:27 - 18:12
O.14.05.3	**Question and Answer - Panel**	18:12 - 18:25

Friday, 17. April 2026

Lecture Session
14: Pharmacology and Technology
Friday, April 17, 2026, 08:15 - 09:45

O.14.06 - Artificial Intelligence in Anaesthesiology: Practical Applications and Innovations

► Session Description

This session explores the latest practical applications and innovations of artificial intelligence (AI) in anaesthesiology, emphasizing perioperative medicine, opioid outcome prediction, and generative AI tools tailored specifically for clinicians. Attendees will critically examine systemic biases and ethical considerations in AI deployment, gain insights into predictive modeling to improve patient care, and learn how to effectively integrate generative AI strategies into clinical practice.

Chair: Vesela Kovacheva (Boston, United States)

O.14.06.1	**Introduction**	08:15 - 08:17
O.14.06.2	**AI in perioperative medicine** Speaker: Valentina Bellini (Parma, Italy)	08:17 - 08:35
O.14.06.3	**AI by Us, for all of us** Speaker: Leo Anthony Celi (Boston, United States)	08:35 - 08:53
O.14.06.4	**Leveraging AI for predicting perioperative opioid outcomes** Speaker: Rodney Gabriel (La Jolla, United States)	08:53 - 09:11
O.14.06.5	**Generative AI for clinicians: navigating pitfalls and unlocking potential** Speaker: Hannah Lonsdale (Nashville, United States)	09:11 - 09:29
O.14.06.6	**Question and Answer - Panel**	09:29 - 09:45

Lecture Session
14: Pharmacology and Technology
Friday, April 17, 2026, 10:15 - 11:15

O.14.07 - AI-Enhanced Perioperative Care: From Analytics to Generative AI

► Session Description

This session highlights advancements in AI-enhanced perioperative care, from automated preoperative assessment and patient optimization for day surgery, to the implementation of perioperative AI chatbots for improved patient-physician engagement. Attendees will learn how AI can streamline clinical workflows by analyzing electronic health records, optimizing surgical appropriateness, and enhancing patient communication, while also addressing ethical considerations and physician acceptance of these emerging technologies.

Chair: Maxime Cannesson (Los Angeles, United States)

O.14.07.1	**Introduction**	10:15 - 10:17
O.14.07.2	**Automated preoperative assessment** Speaker: Vesela Kovacheva (Boston, United States)	10:17 - 10:32
O.14.07.3	**Preoperative optimization of day surgery patients** Speaker: Rodney Gabriel (La Jolla, United States)	10:32 - 10:47
O.14.07.4	**Perioperative AI chatbots: enhancing patient care and physician acceptance** Speaker: Yu He Ke (Singapore, Singapore)	10:47 - 11:02
O.14.07.5	**Question and Answer - Panel**	11:02 - 11:15

Lecture Session
14: Pharmacology and Technology
Friday, April 17, 2026, 13:50 - 14:50

O.14.08 - Global Perspectives on AI: Models, Multilingual Applications, and Governance

► Session Description
This session examines global perspectives on artificial intelligence, emphasizing cross-cultural comparisons and governance in healthcare. Speakers will address leveraging Asian-based large language models (LLMs) for multilingual patient consent, explore distinctions between Chinese and Western AI models, and discuss the implications and challenges of global AI governance in diverse clinical environments.

Chair: Hannah Lonsdale (Nashville, United States)

O.14.08.1	**Introduction**	13:50 - 13:52
O.14.08.2	**Leveraging asian-based large language models (LLMs) for multilingual patient consent** Speaker: Yu He Ke (Singapore, Singapore)	13:52 - 14:07
O.14.08.3	**Chinese vs Western AI Models** Speaker: Albert Chan (Hong Kong, Hong Kong SAR, China)	14:07 - 14:22
O.14.08.4	**Global AI governance** Speaker: Elena Bignami (Parma, Italy)	14:22 - 14:37
O.14.08.5	**Question and Answer - Panel**	14:37 - 14:50

Lecture Session
14: Pharmacology and Technology
Friday, April 17, 2026, 15:00 - 16:00

O.14.09 - Lessons Learned from AI Implementation

► Session Description
This session reflects on lessons learned from real-world AI implementations in anaesthesiology, exploring how AI currently perceives and supports the specialty. Speakers will address the importance of embedding compassion into human-AI system designs, analyze practical experiences with existing AI tools, and discuss future directions for integrating innovative AI technologies into clinical practice

Chair: Elena Bignami (Parma, Italy)

O.14.09.1	**Introduction**	15:00 - 15:02
O.14.09.2	**How does AI perceive the specialty of anaesthesiology ?** Speaker: Sarah Saxena (Mons, Belgium)	15:02 - 15:17
O.14.09.3	**Humility at the core of human-AI systems** Speaker: Leo Anthony Celi (Boston, United States)	15:17 - 15:32
O.14.09.4	**AI in anaesthesia today: real-world applications and future directions** Speaker: Hannah Lonsdale (Nashville, United States)	15:32 - 15:47
O.14.09.5	**Question and Answer - Panel**	15:47 - 16:00

Saturday, 18. April 2026

Workshop
14: Pharmacology and Technology
Saturday, April 18, 2026, 08:30 - 10:00

WS.14.01 - TIVA and TCI. A "Fireside Chat" about Total Intravenous Anaesthesia: Theoretical and Practical Considerations

► **Workshop Description:**
Theoretical and practical aspects of total intravenous anaesthesia is the focus of this interactive workshop/discussion. The session is organized as a "Fireside Chat:" Mini-lectures (5 min) followed by question and answers (10 min) addressing selected topics. A host will moderate the session, interviewing Dr. Egan and interacting with the audience. The audience will be asked to share their insights and experience.
► **Learning Objectives:**
① Describe the advantages of gaining access to the circulation via the lung for drug administration.
② Define the term posology and understand how posology is different in anaesthesiology compared to other medical disciplines.
③ Explain how a surfing analogy can be helpful in understanding an approach to optimizing anaesthesia posology.
④ Distinguish the three different practice domains for intravenous anaesthesia (i.e., dose, concentration, and effect).
⑤ Explain how pharmacokinetic-dynamic models are applied to the clinical realm through simulation.
⑥. Analyze the key kinetic-dynamic attributes of common total intravenous anaesthesia drugs (e.g., bolus front-end kinetics, infusion back-end kinetics, propofol Cp50 reduction by opioids, etc.).
⑦ Appraise how propofol and opioid kinetic simulations can inform anaesthesia posology decisions.
⑧. Describe some clinical tips and tricks for optimizing total intravenous anaesthesia.
⑨ Explain how a target controlled infusion system is different than using a standard calculator pump.

♦ **Max No. participants:** 40
♦ **Price:** Complimentary

Workshop Lead: Talmage Egan (Salt Lake City, United States)
Workshop Instructor: Ken Johnson (Tucson, United States)

Workshop
14: Pharmacology and Technology
Saturday, April 18, 2026, 08:30 - 10:00

WS.14.02 - Vibe Coding for Anaesthesiologists: Build Clinical Tools with AI

► **Workshop Description:**
This interactive workshop is designed for anaesthesiologists interested in practically applying large language models (LLMs) to clinical and research tasks. No prior coding experience is required; however, participants with basic familiarity in interpreting or troubleshooting simple code may benefit more substantially. Participants will learn intuitive "vibe coding" techniques to rapidly prototype clinical resources, analyze datasets, and create educational or research tools. While powerful for prototyping, vibe coding is not intended for direct clinical deployment without proper verification and expert oversight, due to inherent limitations in reliability and potential accuracy issues. The session emphasizes data privacy, safety, understanding common limitations, and knowing when and how to seek technical expertise. Through structured demonstrations and interactive activities, participants will build calculators, analyze and visualize clinical data, and develop web resources while gaining confidence in addressing common coding challenges.

► **Session Agenda:**
① **Introduction to Vibe Coding with LLM Assistance (10 min)**
» Brief overview of vibe coding: rapidly building prototypes using LLMs.
» Recommended platforms/tools (Python, Streamlit, HuggingFace, etc.).
» Discussion of the limitations of vibe coding, including accuracy, debugging challenges, code reliability, and the importance of code review or expert oversight.
» Data security, privacy considerations, safe practices, and when to seek expert assistance.
② **Task 1: Create a Clinical Calculator (25 min)**
» Hands-on session to develop practical perioperative tools (e.g., BMI, fluid management, anesthetic dosing calculators).
» Guided exercises explicitly highlighting areas where errors or debugging issues commonly occur.
③ **Task 2: Analyze Your Own Clinical Dataset (25 min)**

» Load, summarize, and quickly analyze clinical or research data.
» Generate insightful visualizations or perform basic statistical analyses using intuitive tools.
» Highlight potential inaccuracies/limitations and how to verify LLM-generated code.
④ **Task 3: Build Your Own Clinical or Academic Web App (20 min)**
» Quickly develop and deploy an interactive web application (e.g., showcase research findings, patient education, clinical resources).
» Demonstrate potential pitfalls when rapidly prototyping web applications and strategies to address them.
⑤ **Wrap-up & Additional Resources (10 min)**
» Best practices and troubleshooting tips.
» Specific recommendations on where and how to seek further support and expert assistance after the workshop.
» Recommendations for continued learning and additional support.

► **Learning Objectives:**
By the end of this workshop, participants will be able to:
① Prototype clinical tools, including perioperative calculators and guidelines, using accessible LLM-assisted platforms.
② Rapidly analyze and interpret data using intuitive LLM-based analytics tools.
③ Develop interactive web-based resources with minimal or no coding.
④ Recognize limitations and potential issues with vibe coding, understand debugging basics, and identify when expert input or verification is necessary.

♦ **Max No. participants:** 20
♦ **Price:** US$ 40 | **Reduced Fee:** US$ 20

Workshop Lead: Vesela Kovacheva (Boston, United States)
Workshop Instructor: Albert Chan (Hong Kong, Hong Kong SAR, China)
Workshop Instructor: Sarah Saxena (Mons, Belgium)
Workshop Instructor: Valentina Bellini (Parma, Italy)

Workshop
14: Pharmacology and Technology
Saturday, April 18, 2026, 10:30 - 12:00

WS.14.03 - Monitoring NMB

► **Workshop Description:**
This workshop will provide state-of-the-art knowledge on neuromuscular monitoring during all phases of neuromuscular block, that is during onset, deep, moderate, and shallow block, and finally how to assess return to normal neuromuscular function to avoid residual neuromuscular block. Participants will have a hands-on opportunity to experience several currently available monitors.
► **Learning Objectives:**
Review the basic principles of neuromuscular monitoring
Discuss routine applications and common pitfalls with neuromuscular monitoring
Present recommendations for routine use of neuromuscular monitoring in the perioperative period

♦ **Max No. participants:** 40
♦ **Price:** Complimentary

Workshop Lead: Stephan Thilen (Seattle, United States)
Workshop Instructor: Lars Eriksson (Stockholm, Sweden)
Workshop Instructor: Ken Johnson (Tucson, United States)

Workshop
14: Pharmacology and Technology
Saturday, April 18, 2026, 10:30 - 12:00

WS.14.04 - Introduction to LLMs for Anaesthesiologists

► **Workshop Description:**
Large language models (LLMs), such as ChatGPT, have rapidly transformed healthcare and research by enhancing clinical decision-making, patient communication, educational initiatives, and academic productivity. This interactive workshop introduces anesthesiologists to the fundamentals of LLMs, emphasizing practical applications in clinical anesthesiology and perioperative medicine. Participants will learn effective prompting techniques to improve clinical accuracy, streamline patient interactions, and facilitate academic productivity. Through hands-on activities and practical scenarios, attendees will leave with foundational knowledge and confidence to integrate LLM tools into their

daily practice and scholarly endeavors.
► **Learning Objectives:**
① Describe large language models (LLMs) and their potential impact on anesthesiology practice, patient care, and research productivity.
② Demonstrate effective prompting techniques to obtain accurate, clinically relevant, and context-specific outputs from LLMs.
③ Apply LLMs to create practical clinical resources, including patient-friendly educational materials, consent forms, discharge instructions, and concise summaries of perioperative guidelines.
④ Leverage LLMs to efficiently generate abstracts and research outlines, facilitating academic writing and publication processes.

♦ **Max No. participants:** 30
♦ **Price:** US$ 20 | **Reduced Fee:** US$ 10

Workshop Lead: Rodney Gabriel (La Jolla, United States)
Workshop Instructor: Hannah Lonsdale (Nashville, United States)
Workshop Instructor: Yu He Ke (Singapore, Singapore)
Workshop Instructor: Elena Bignami (Parma, Italy)